

399-2-17 (C6195) Log Data Report

Borehole Information:

Borehole: 399-2-17 (C6195)			Site: 300-FF-5		
Coordinates (WA St Plane)		GWL¹ (ft):	27.6	GWL Date:	06/16/08
North (m)	East (m)	Drill Date	TOC² Elevation	Total Depth (ft)	Type
116060.3	594246.1	06/12/08	Unknown	63	Sonic

Casing Information:

Casing Type	Stickup (ft)	Outer Diameter (in.)	Inside Diameter (in.)	Thickness (in.)	Top (ft)	Bottom (ft)
Welded Steel	0.7	7 5/8	6 7/8	3/8	-0.7	59.5

Borehole Notes:

Casing data and total depth were reported by site geologist. Logging engineer measured depth to water with an e-tape. Casing diameters were measured using a steel tape and rounded to the nearest 1/16". The zero reference is the ground surface.

Logging Equipment Information:

Logging System:	Gamma 4 L		Type:	60% HPGe SGLS
			Serial No.:	47TP32211A
Effective Calibration Date:	12/31/07	Calibration Reference:	HGLP-CC-027	
		Logging Procedure:	HGLP-MAN-002, Rev. 0	

Logging System:	Gamma 4 H		Type:	NMLS
			Serial No.:	H310700352
Effective Calibration Date:	11/06/07	Calibration Reference:	HGLP-CC-021	
		Logging Procedure:	HGLP-MAN-002, Rev. 0	

Spectral Gamma Logging System (SGLS) Log Run Information:

Log Run	1	2 Repeat
Date	06/19/08	06/19/08
Logging Engineer	Pearson	Pearson
Start Depth (ft)	62.0	28.0
Finish Depth (ft)	0.0	22.0
Count Time (sec)	200	200
Live/Real	R	R
Shield (Y/N)	N	N
MSA Interval (ft)	0.5	0.5
Log Speed (ft/min)	N/A	N/A
Pre-Verification	DL471CAB	DL471CAB
Start File	DL471000	DL471125
Finish File	DL471124	DL471137
Post-Verification	DL471CAA	DL471CAA

Log Run	1	2 Repeat
Depth Return Error (in.)	Low ¼	0
Comments	Fine gain adjustment made before -053	Repeat Section

Neutron Moisture Logging System (NMLS) Log Run Information:

Log Run	3	4 Repeat
Date	06/18/08	06/18/08
Logging Engineer	McClellan	McClellan
Start Depth (ft)	0.0	26.75
Finish Depth (ft)	26.75	24.0
Count Time (sec)	15	15
Live/Real	R	R
Shield (Y/N)	N	N
MSA Interval (ft)	0.25	0.25
Log Speed (ft/min)	N/A	N/A
Pre-Verification	DHF42CAB	DHF42CAB
Start File	DHF42000	DHF42108
Finish File	DHF42107	DHF42119
Post-Verification	DHF42CAA	DHF42CAA
Depth Return Error (in.)	N/A	0.5 high
Comments	None.	Repeat Section

Logging Operation Notes:

Data were collected using Gamma 4, HO 68B-3573. SGLS pre- and post-survey verification measurements were acquired in the A mersham KUTH-115 field verifier. Maximum logging depth was 62.2 ft before the sonde un-weighted. A centralizer was installed on the sonde. Due to site-wide "Take Cover" drill, the log includes a 2.5 hour gap between -052 and -053.

NMLS pre- and post-survey verification measurements were acquired in the standard field verifier. Maximum logging depth achieved was 26.75 ft, approximately at groundwater level.

Analysis Notes:

Analyst:	LEGLER	Date:	08/04/08	Reference:	GJO-HGLP 1.6.3, Rev. 0
-----------------	--------	--------------	----------	-------------------	------------------------

SGLS pre- and post-survey verification spectra met the acceptance criteria for the established system. NMLS pre- and post-survey verification spectra met the acceptance criteria for the established system, but the spectra files DHF42CAB and DHF42CAA had measurements above the upper control limits for counts per second (cps).

A casing correction for a 3/8-in. thick casing was applied from ground surface to 59.5 ft where casing ends, leaving 2.5 ft of open borehole uncorrected. A water correction was also applied during analysis from 27.6 ft to total logged depth of borehole.

SGLS spectra were processed in batch mode using APTEC SUPERVISOR to identify individual peaks and count rates. Concentrations were calculated using an EXCEL template identified as G4LDec07.xls using an efficiency function and corrections for casing, dead time and water as determined by annual calibrations. NMLS spectra were processed in batch mode using APTEC SUPERVISOR to identify counts. Count rates were calculated using an EXCEL template identified as G4HNov07.xls. NMLS data are presented in counts per second (cps), because no calibration data is available for a 6 7/8-in. inner diameter borehole casing.

Results and Interpretations:

U-235 and U-238 (Pa-234m) were detected sporadically in this borehole. Inspection of the individual spectra at these depths indicates that these detections are statistical fluctuations associated with the processing software and are not considered valid.

The KUT plots indicate good repeatability. The repeat Moisture plot indicates good repeatability.

List of Log Plots:

Depth Reference is ground surface

Manmade Radionuclides

Natural Gamma Logs

Combination Plot

Total Gamma & Dead Time

Total Gamma & Moisture

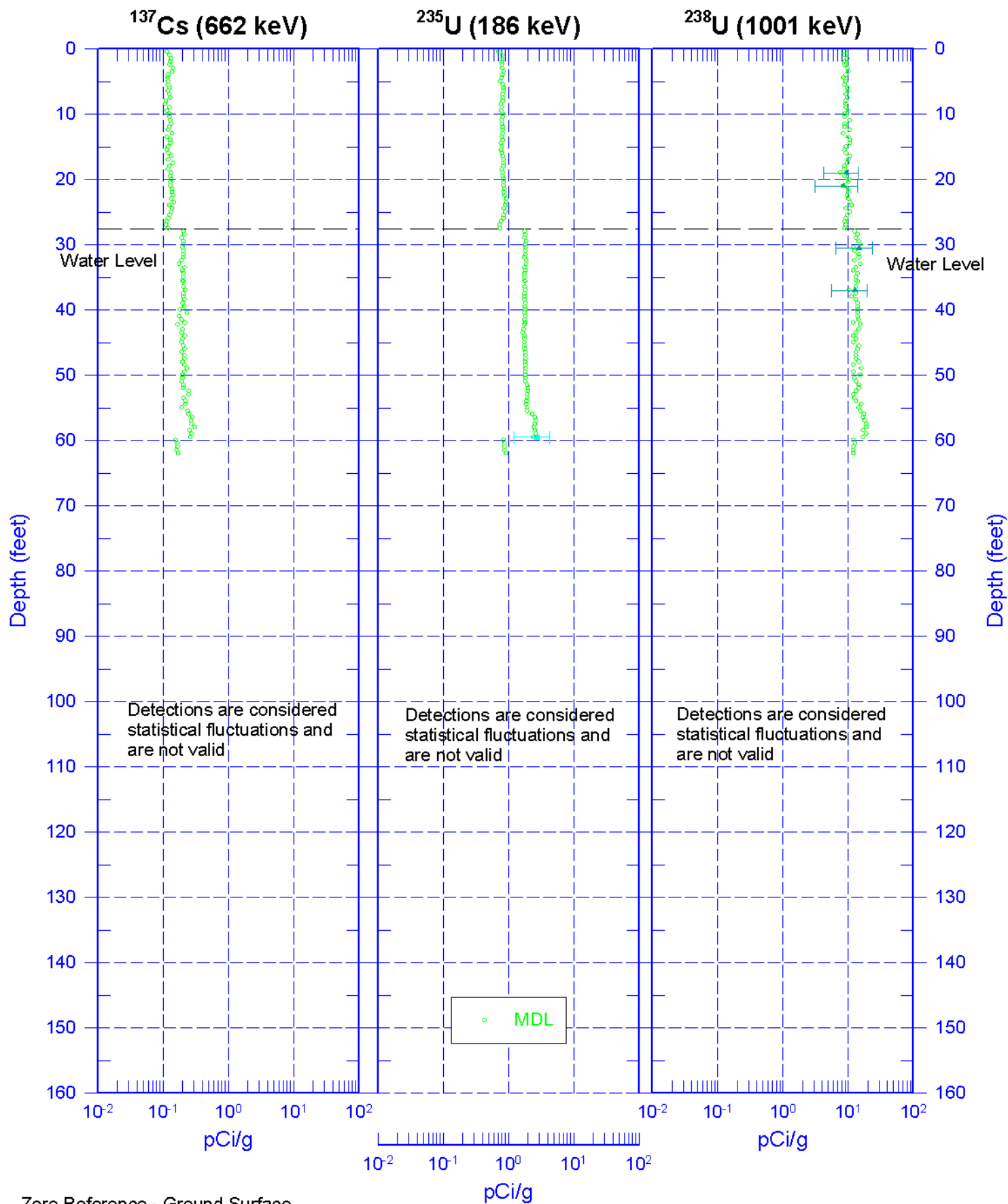
Repeat Section of Natural Gamma Logs

Moisture Repeat Section

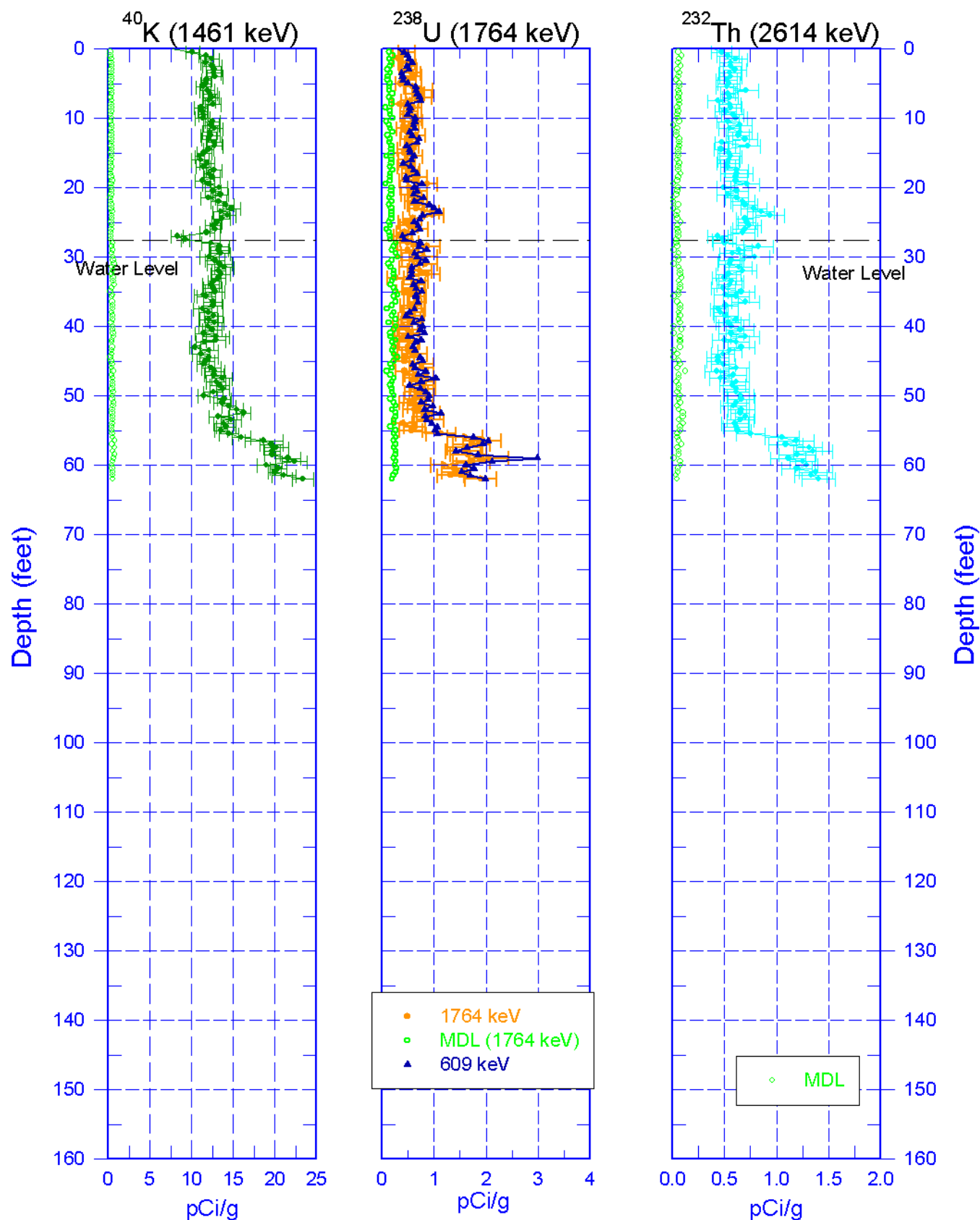
¹ GWL – groundwater level

² TOC – top of casing

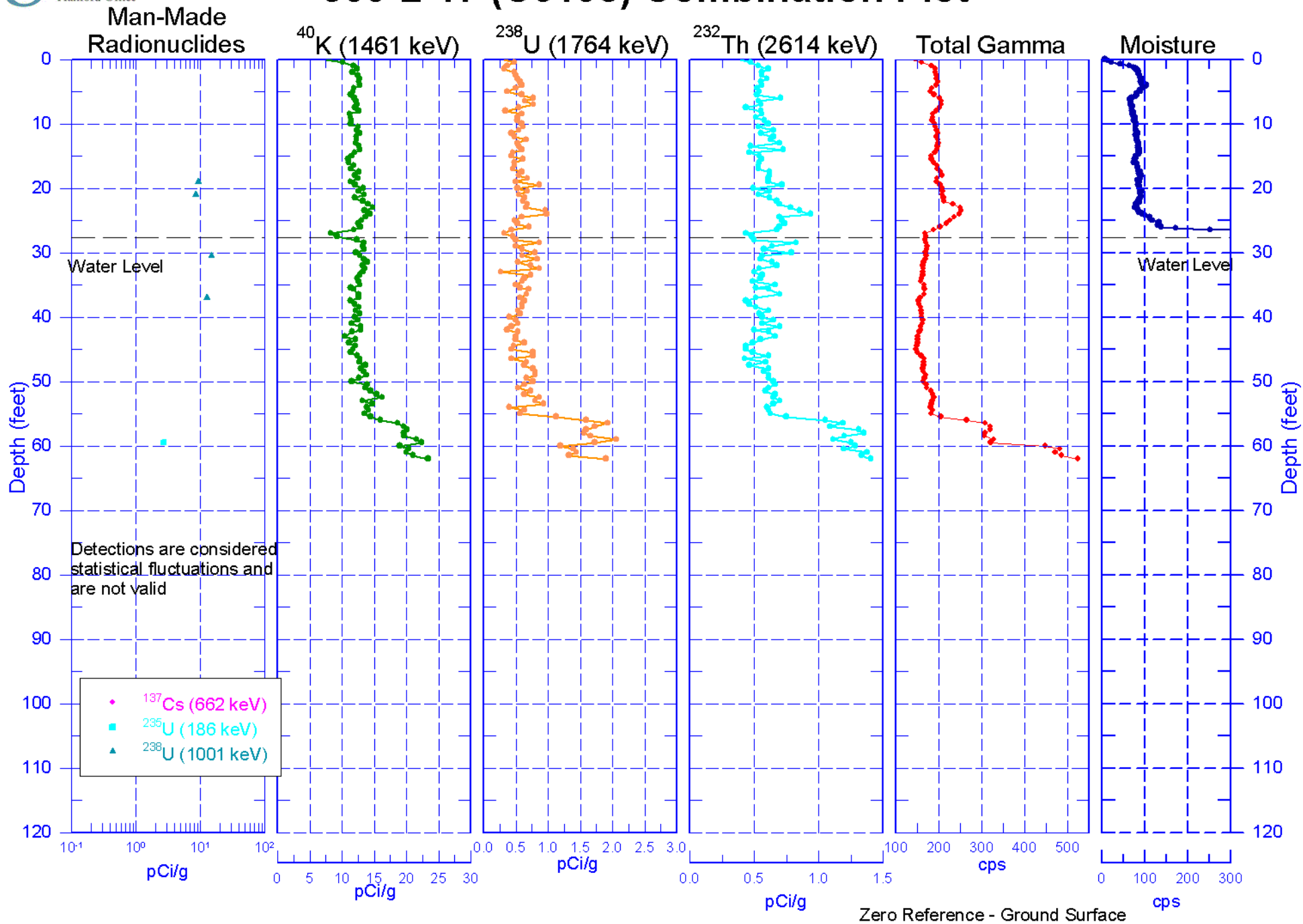
399-2-17 (C6195) Manmade Radionuclides



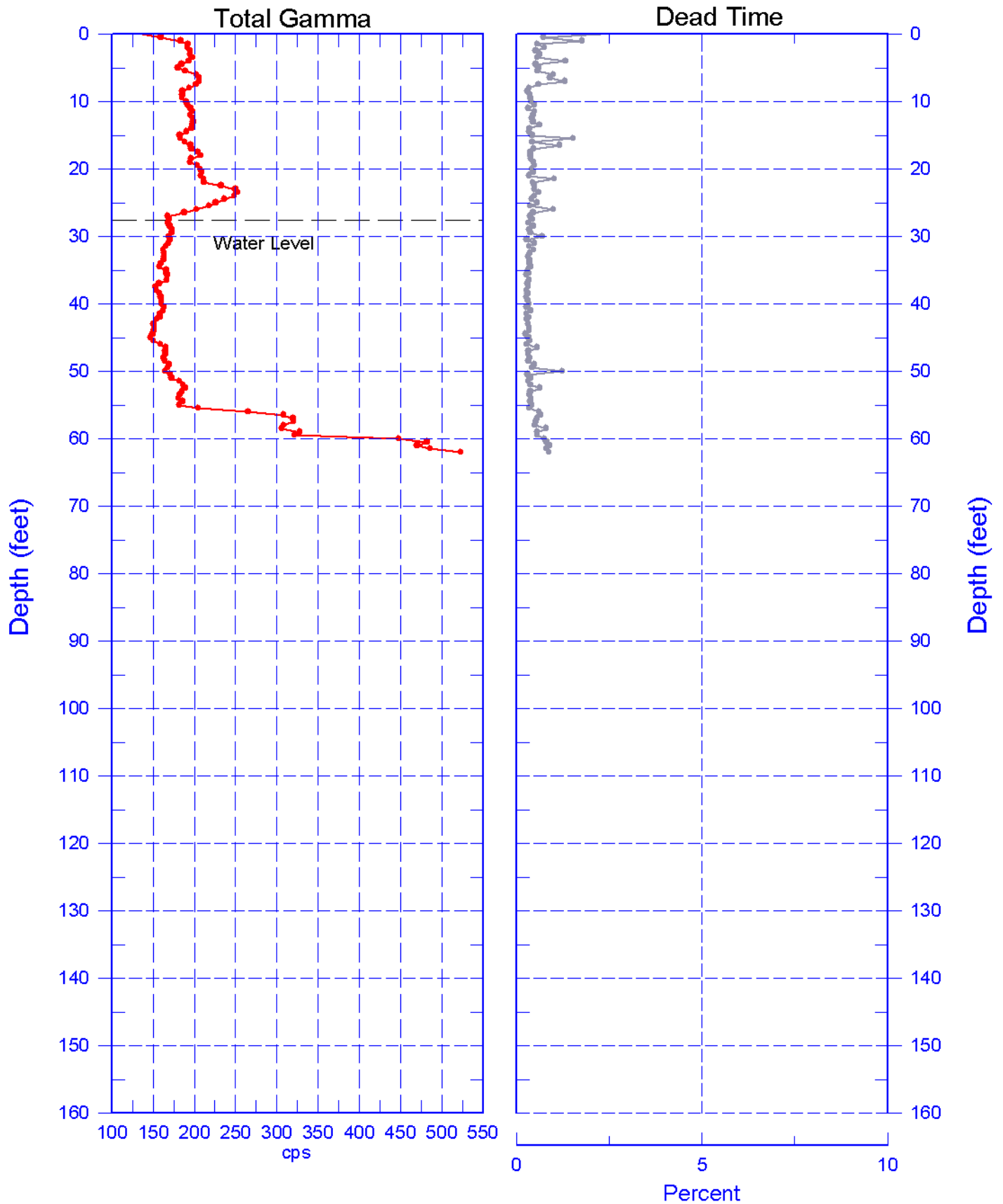
399-2-17 (C6195) Natural Gamma Logs



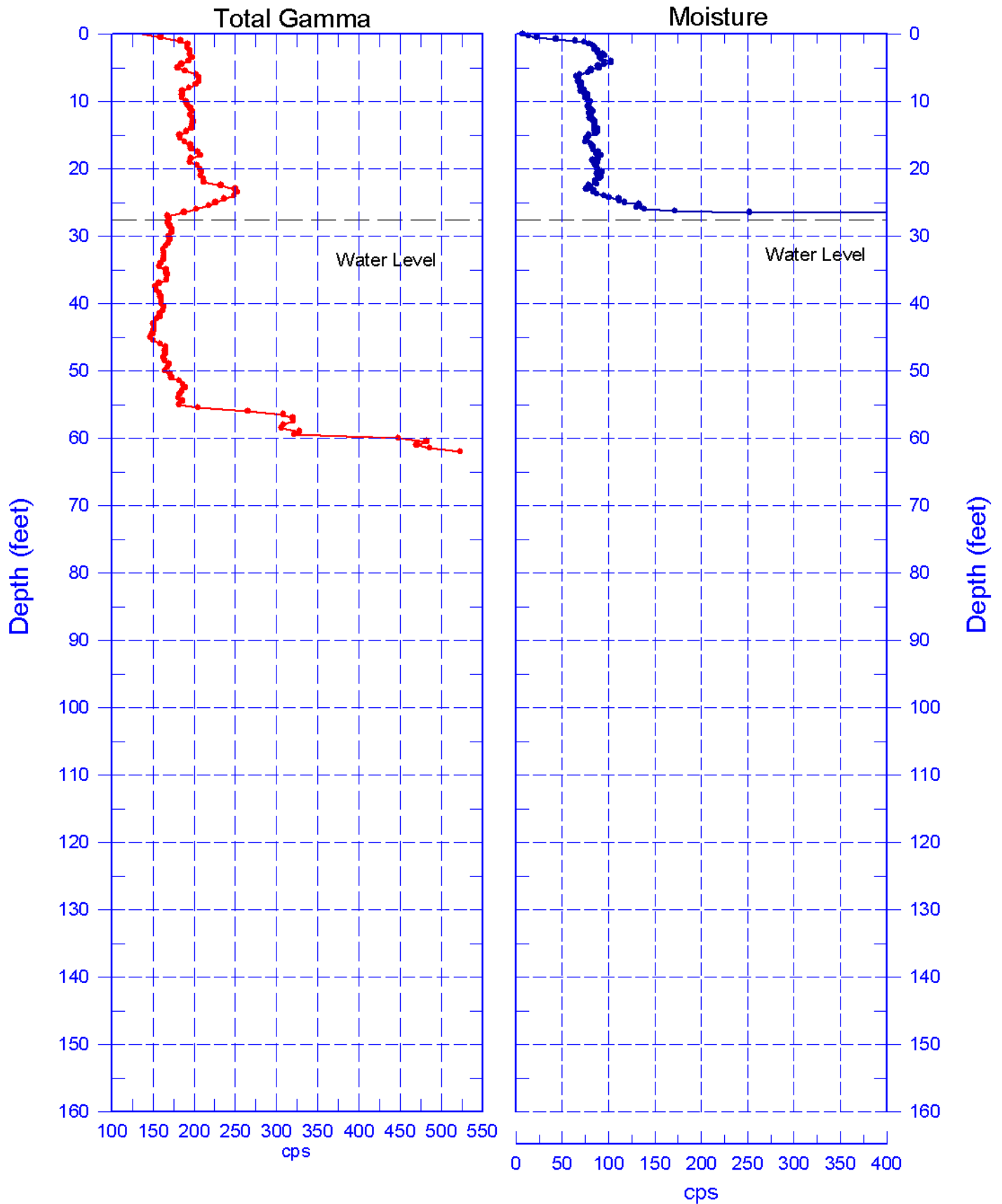
399-2-17 (C6195) Combination Plot



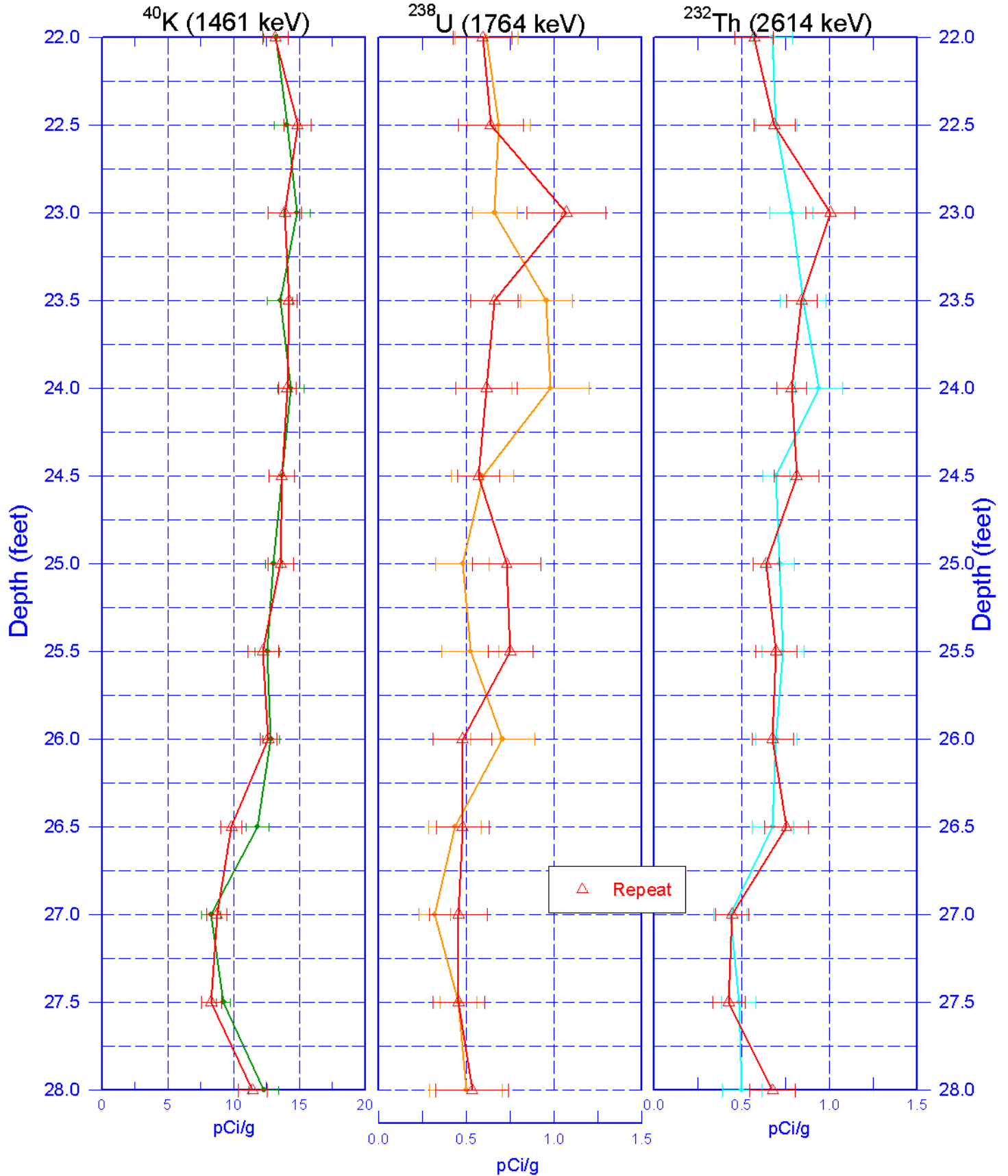
399-2-17 (C6195) Total Gamma & Dead Time



399-2-17 (C6195) Total Gamma & Moisture



Repeat Section of Natural Gamma Logs



399-2-17 (C6195) Moisture Repeat Section

